AMP INCORPORATED
HARRISBURG, PA. 17105

AMP★ 1000 STAGGERED SERIES BOX CONNECTORS

Instruction Sheet
IS 7335
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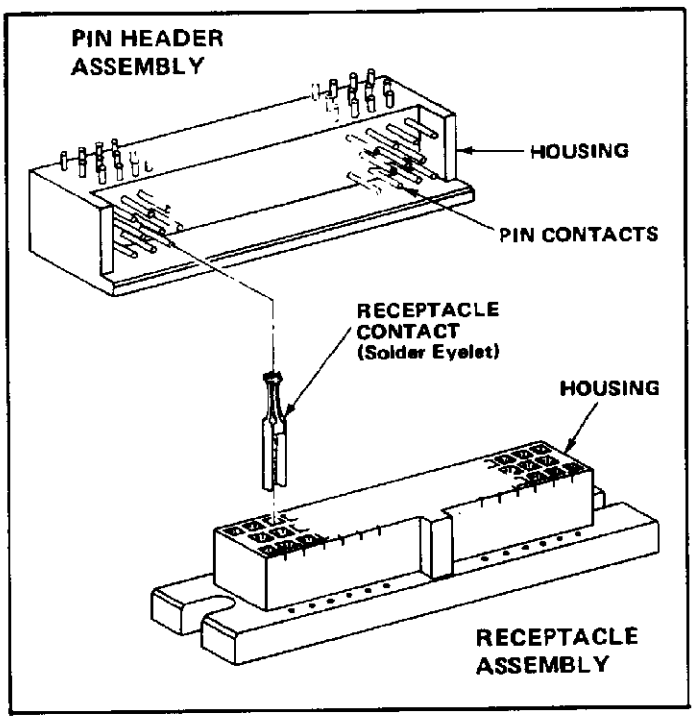

Fig. 1

1. INTRODUCTION

This instruction sheet (IS) covers the installation and keying of AMP 1000 Staggered Series Box Connectors. Read this material thoroughly before assembling any connector.

NOTE

All dimensions presented on this instruction sheet are in inches, unless otherwise stated.

2. DESCRIPTION (see Figure 1)

These connectors are designed for printed circuit (pc) board to pc board, or pc board to individual wire applications. A connector consists of a pin header assembly and a mating receptacle assembly.

A pin header assembly is a housing preloaded with pin (male) contacts. Pin header assemblies are designed to mount in a right angle (90°) configuration to the flat surface of a pc board.

A receptacle assembly is a housing preloaded with receptacle (female) contacts. Contacts are available with different tail configurations for specific applications (see Figure 2).

3. INSTALLING PIN HEADER ASSEMBLIES

These assemblies are designed to be mounted and soldered at a right angle to a pc board (3/32 [.094] in. max. thickness).

Refer to Figure 3 and proceed as follows:

1. Determine number of contact positions in assembly to be mounted. Make a layout on the pc board using the recommended dimensions provided.
2. Insert pin contact tines through holes in pc board.
3. Clean area to be soldered, using standard flux cleaning procedures.
4. Solder contacts to pc board, using standard soldering techniques.

4. INSTALLING RECEPTACLE ASSEMBLIES

A. Receptacle Assemblies with Flow Solder Contacts

These assemblies are designed to be mounted and soldered vertically on a pc board (1/8 [.125] in. max. thickness).

Refer to Figure 3 and proceed as follows:

1. Determine number of contact positions in assembly to be mounted. Make a layout on the pc board using the recommended dimensions provided.
2. Insert flow solder contact tines (tails) through holes in pc board.
3. Mount assembly to pc board using bolts or rivets.
4. Solder contacts to pc board using standard soldering techniques.

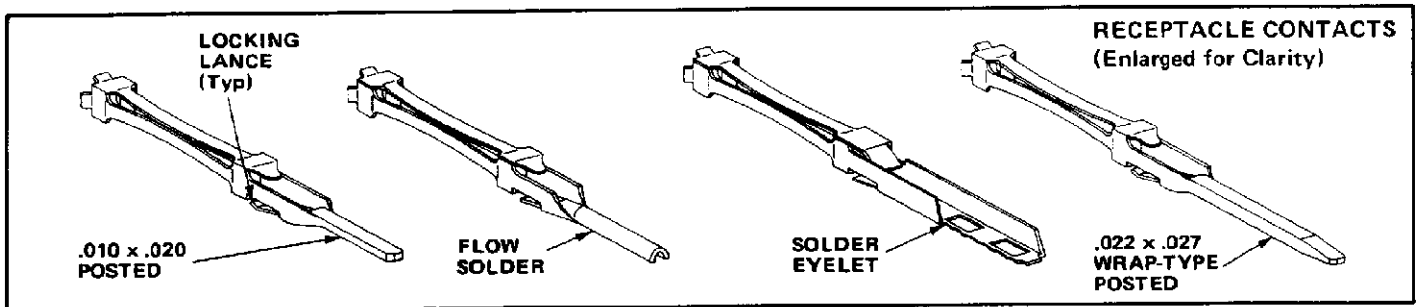

Fig. 2

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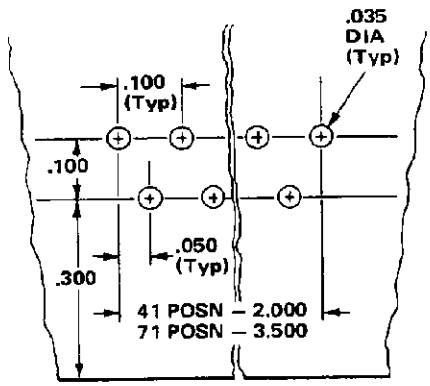
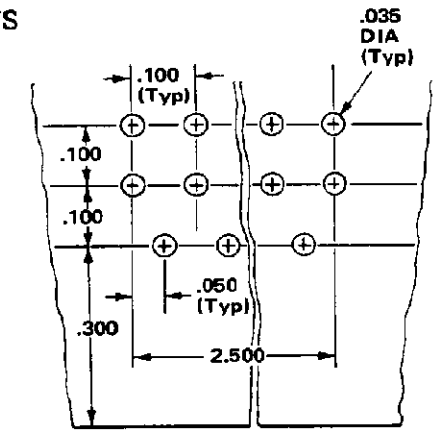
PIN HEADER ASSEMBLIES PC BOARD LAYOUTS

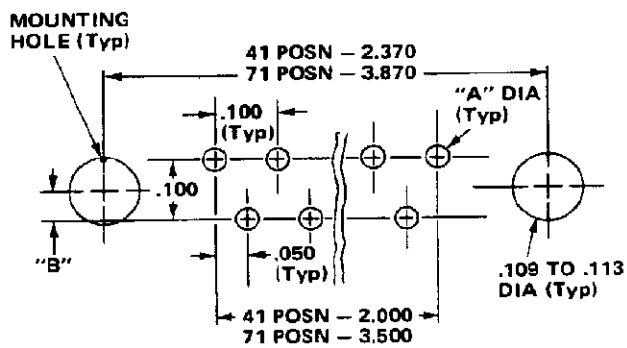


41 AND 71 POSITION

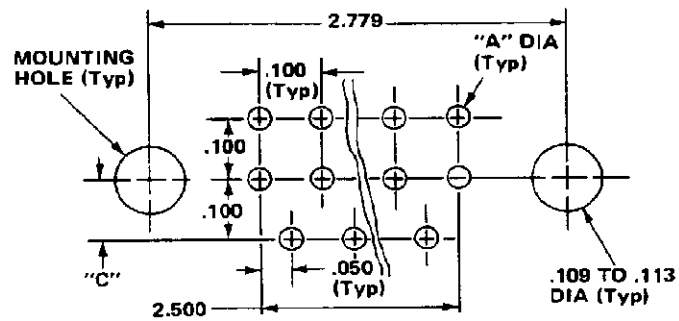


77 POSITION

RECEPTACLE ASSEMBLIES PC BOARD LAYOUTS



41 AND 71 POSITION



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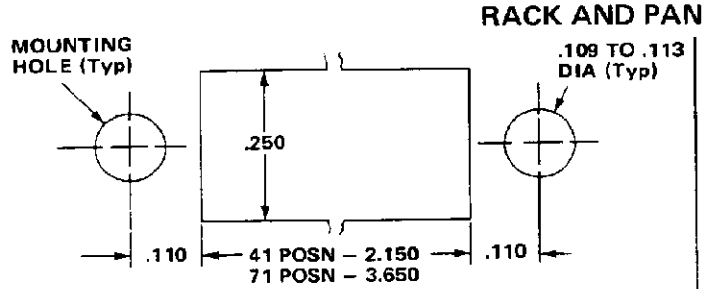
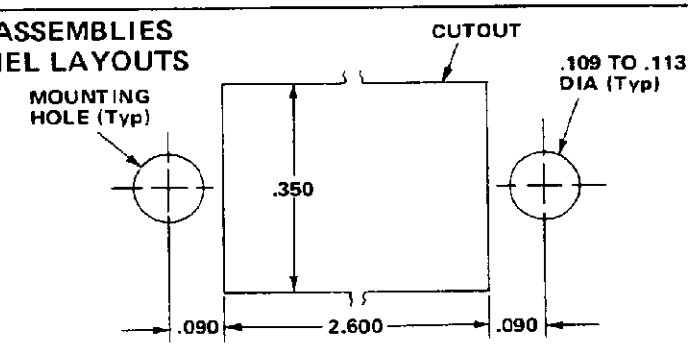
CONTACT TYPE	DIMENSION		
	"A" MIN	"B"	"C"
.010 x .020 Posted	.030	.050	.100
Flow Solder	.025	.025	.075

RECEPTACLE ASSEMBLIES RACK AND PANEL LAYOUTS



41 AND 71 POSITION



77 POSITION

Fig. 3

B. Receptacle Assemblies with Solder Eyelet Contacts

These assemblies are designed to be rack or panel mounted. Each eyelet contact will accept single or multiple wire terminations. For single terminations, wire is placed in contact channel and soldered. For multiple terminations, each wire is placed in a separate eyelet and soldered (see Figure 4).

CAUTION *Do NOT clinch or wrap wires to the contact eyelet tail.*

Refer to Figure 3 and proceed as follows:

1. Make rack or panel layout using the recommended dimensions provided for cutout and/or mounting holes.

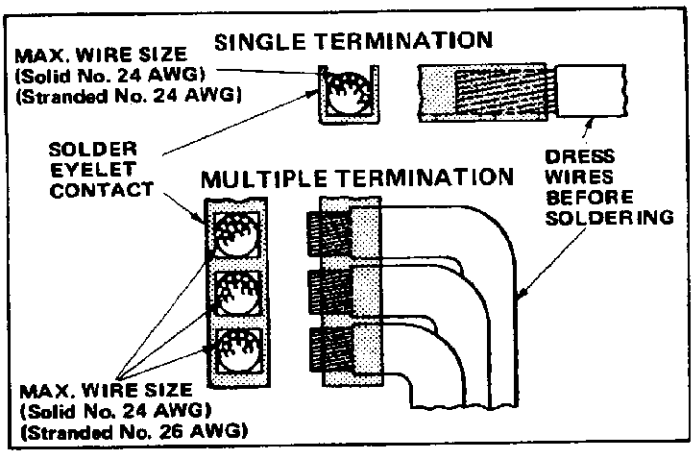


Fig. 4

2. Insert and mount assembly in rack or panel using bolts or rivets.

3. Dress wires in proper direction. This will prevent bending of contacts after they are soldered. See Figure 4.

4. Position wire in contact channel (or eyelet) and solder.

C. Receptacle Assemblies with .010 X .020 Posted Contacts

These assemblies are designed to be mounted and soldered vertically on a pc board (1/8 [.125] in. max. thickness). Each posted contact will accept one wrap-type termination using No. 30 or 32 AWG wire.

Refer to Figure 3 and proceed as follows:

1. Make a layout on the pc board using the recommended dimensions provided.

2. Insert posted contact tines (tails) through holes in pc board.

3. Mount assembly to pc board using bolts or rivets.

4. Solder contacts to pc board using standard soldering techniques.

5. If applicable, apply one wrap-type termination to each posted contact.

D. Receptacle Assemblies with .022 X .027 Wrap-Type Posted Contacts

These assemblies are designed to be rack or panel mounted. Each posted contact will accept up to three wrap-type terminations (see Figure 5).

Refer to Figure 3 and proceed as follows:

1. Make rack or panel layout using the recommended dimensions provided for cutout and/or mounting holes.

2. Insert and mount assembly in rack or panel using bolts or rivets.

3. Apply wrap-type termination(s) to contact using the information provided in Figure 5.

Post Length	.725
Wires Per Post	3 High (Max.)

Maximum wire size for wrapping the posted terminal is No. 30 AWG (max. insulated wire diameter, .019").

The following data can be used to determine bit and sleeve size for the Wire-Wrap tool*.

Maximum Terminal Diagonal: .034
Minimum Terminal Diagonal: .034
Maximum Effective Radius: .067

Recommended Sleeve: No. 507100*

Recommended Bits: No. 511208*
No. 507063*

*Available from Gardner-Denver Co., Grand Haven, Michigan.

Fig. 5

5. KEYING

Keying ensures that only the two properly prepared assemblies (pin header and receptacle) can be mated. There are two methods of keying: (1) a keying sleeve, or (2) a formed keying insert.

A. Keying Sleeve 530783 (see Figure 6)

AMP Clinching Tool 91141-1 is designed to apply the keying sleeve onto a pin contact in the pin header assembly. Refer to AMP Instruction Sheet IS 7869, packaged with the clinching tool for proper clinching procedures.

The mating receptacle assembly is keyed by removing corresponding receptacle contact and drilling a .075-in. diameter hole completely through the contact cavity.

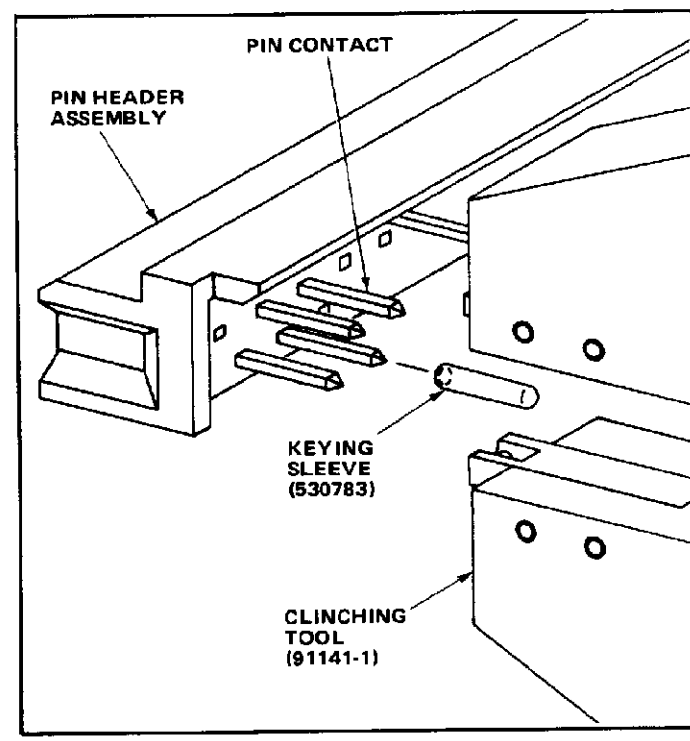


Fig. 6

B. Keying Insert 202934 (see Figure 7)

This "U" shaped keying insert is designed to fit into slots and holes in the receptacle assembly. The pc board (on which the pin header assembly is mounted) must have a slot cut out to accept the keying insert.

Refer to Figure 7 and proceed as follows:

1. Notice the small slots cut between several cavities at both ends of housing (mating face). Orient the keying insert with the selected slots.
2. Push keying insert into slots until pointed ends go through small holes in housing shoulder. Make sure keying insert is bottomed in slots and holes.

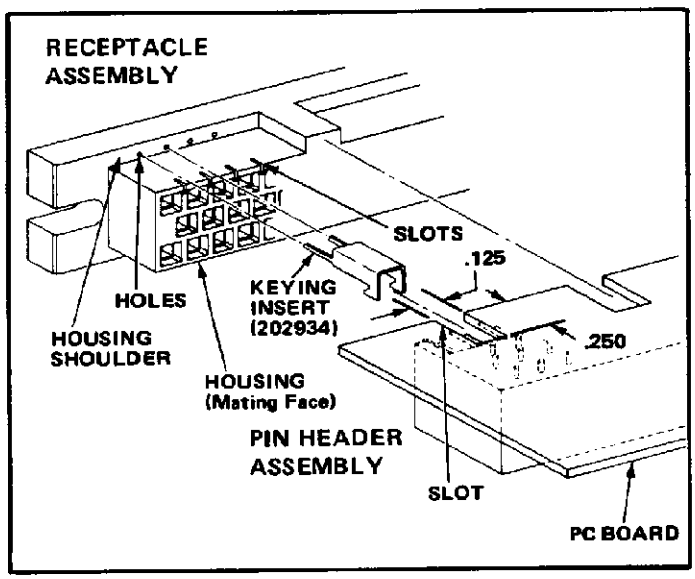


Fig. 7

3. Flatten pointed ends of keying insert against back of housing shoulder.
4. Cut corresponding slot in pin header assembly pc board.

6. REPLACING DAMAGED CONTACT

A. Extracting Receptacle Assembly Contacts

AMP Extraction Tool 91035-1 is designed to remove contacts from unsoldered receptacle assemblies.

NOTE

If contact is soldered to a pc board and/or wires are attached to contact, remove ALL solder and/or wires before attempting extraction.

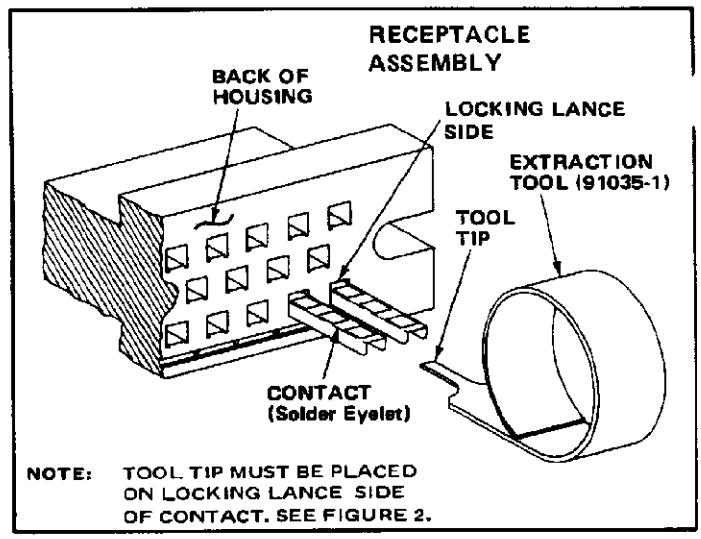


Fig. 8

Refer to Figure 8 and proceed as follows:

1. Align tool tip with REAR of contact to be removed (BACK of housing). Make sure tool will enter cavity on locking lance side of contact.
2. Insert tool into cavity until it bottoms against housing. Hold tool in this position. The contact locking lance is now released.
3. Push forward on REAR of contact with finger. Contact will partially eject out FRONT of cavity. Remove tool and pull contact out c cavity.

B. Inserting Receptacle Assembly Contacts

No special insertion tool is required for inserting receptacle contacts into the housings. Proceed as follows:

1. Check to be sure contact locking lance is sprung outward approximately 15°.
2. Orient contact with those already installed in housing.
3. Align contact with FRONT of desired contact cavity. Start contact, tail end first, into cavity. Push contact into cavity as far as possible.
4. Using a suitable tool (.046 dia), push contact in until locking lance seats in housing.
5. Push forward lightly on contact tail to be sure contact is locked in housing.